

(FILE 'HOME' ENTERED AT 12:23:47 ON 17 MAY 2007)

FILE 'REGISTRY' ENTERED AT 12:24:01 ON 17 MAY 2007

L1 STRUCTURE UPLOADED
L2 0 S L1

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:37:04 ON 17 MAY 2007
SEA (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE) AND (BRANCHED OR

1 FILE ADISCTI
496 FILE AGRICOLA
16 FILE ANABSTR
13 FILE ANTE
3 FILE AQUALINE
109 FILE AQUASCI
190 FILE BIOENG
2082 FILE BIOSIS
883 FILE BIOTECHABS
883 FILE BIOTECHDS
389 FILE BIOTECHNO
977 FILE CABA
4841 FILE CAPLUS
55 FILE CEABA-VTB
17 FILE CIN
18 FILE CONFSCI
1 FILE CROPB
34 FILE CROPU
10 FILE DDFB
86 FILE DDFU
3629 FILE DGENE
146 FILE DISSABS
10 FILE DRUGB
134 FILE DRUGU
6 FILE EMBAL
872 FILE EMBASE
688 FILE ESBIODBASE
375 FILE FROSTI
680 FILE FSTA
1531 FILE GENBANK
2346 FILE IFIPAT
14 FILE KOSMET
475 FILE LIFESCI
1006 FILE MEDLINE
21 FILE NTIS
2 FILE NUTRACEUT
33 FILE OCEAN
981 FILE PASCAL
2 FILE PHAR
9 FILE PHIN
401 FILE PROMT
1 FILE PROUSDDR
27 FILE RDISCLOSURE
1963 FILE SCISEARCH
660 FILE TOXCENTER
80997 FILE USPATFULL
11413 FILE USPAT2
4 FILE VETU
14 FILE WATER
2043 FILE WPIDS
18 FILE WPIFV
2043 FILE WPINDEX

L3 QUE (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE) AND (BRANCHED OR

FILE 'HCAPLUS' ENTERED AT 13:40:09 ON 17 MAY 2007

L4 223076 S (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE)
L5 166171 S BRANCH OR BRANCHED OR BRANCHING
L6 162696 S HYDROXYETHYL OR HYDROXYALKYL OR HYDROXYPROPYL
L7 4095 S (PLASMA OR BLOOD) (2A)EXPAND?
L8 4841 S L4 AND L5
L9 122 S L4 AND L5 AND L6
L10 9 S L4 AND L5 AND L6 AND L7

FILE 'STNGUIDE' ENTERED AT 13:40:18 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:41:23 ON 17 MAY 2007

FILE 'STNGUIDE' ENTERED AT 13:41:31 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:41:55 ON 17 MAY 2007

L11 3895 S L8 AND (PY<2003 OR AY<2003 OR PRY<2003)
L12 88 S L9 AND (PY<2003 OR AY<2003 OR PRY<2003)
L13 9 S L10 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> s (starch or amylopectin or polysaccharide) and (branched or branching or branch)

1 FILE ADISCTI
496 FILE AGRICOLA
16 FILE ANABSTR
13 FILE ANTE
3 FILE AQUALINE
109 FILE AQUASCI
190 FILE BIOENG
2082 FILE BIOSIS
883 FILE BIOTECHABS
883 FILE BIOTECHDS
389 FILE BIOTECHNO
977 FILE CABA
4841 FILE CAPLUS
55 FILE CEABA-VTB
17 FILE CIN
18 FILE CONFSCI
1 FILE CROPB
34 FILE CROPU
10 FILE DDFB
86 FILE DDFU
3629 FILE DGENE
146 FILE DISSABS
10 FILE DRUGB

25 FILES SEARCHED...

134 FILE DRUGU
6 FILE EMBAL
872 FILE EMBASE
688 FILE ESBIODASE
375 FILE FROSTI
680 FILE FSTA
1531 FILE GENBANK
2346 FILE IFIPAT
14 FILE KOSMET
475 FILE LIFESCI
1006 FILE MEDLINE
21 FILE NTIS
2 FILE NUTRACEUT
33 FILE OCEAN
981 FILE PASCAL

48 FILES SEARCHED...

2 FILE PHAR
9 FILE PHIN
401 FILE PROMT
1 FILE PROUSDDR
27 FILE RDISCLOSURE
1963 FILE SCISEARCH
660 FILE TOXCENTER
80997 FILE USPATFULL
11413 FILE USPAT2
4 FILE VETU
14 FILE WATER
2043 FILE WPIDS
18 FILE WPIFV
2043 FILE WPINDEX

52 FILES HAVE ONE OR MORE ANSWERS, 67 FILES SEARCHED IN STNINDEX

L3 QUE (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE) AND (BRANCHED OR BRANCHING OR
R BRANCH)

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

	ENTRY	SESSION
FULL ESTIMATED COST	3.15	3.81

FILE 'HCAPLUS' ENTERED AT 13:40:09 ON 17 MAY 2007
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FILE COVERS 1907 - 17 May 2007 VOL 146 ISS 21
FILE LAST UPDATED: 15 May 2007 (20070515/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate

=> s (starch or amylopectin or polysaccharide)

```
      165523 STARCH
      6640 AMYLOPECTIN
      61084 POLYSACCHARIDE
L4      223076 (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE)
```

=> s branch or branched or branching

```
      44927 BRANCH
      77523 BRANCHED
      54753 BRANCHING
L5      166171 BRANCH OR BRANCHED OR BRANCHING
```

=> s hydroxyethyl or hydroxyalkyl or hydroxypropyl

```
      108850 HYDROXYETHYL
      25625 HYDROXYALKYL
      45308 HYDROXYPROPYL
L6      162696 HYDROXYETHYL OR HYDROXYALKYL OR HYDROXYPROPYL
```

=> s (plasma or blood) (2a) expand?

```
      898796 PLASMA
      1304969 BLOOD
      136816 EXPAND?
L7      4095 (PLASMA OR BLOOD) (2A) EXPAND?
```

=> s L4 and L5

```
L8      4841 L4 AND L5
```

=> s L4 and L5 and L6

```
L9      122 L4 AND L5 AND L6
```

=> s L4 and L5 and L6 and L7

L10 9 L4 AND L5 AND L6 AND L7

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	6.41

FILE 'STNGUIDE' ENTERED AT 13:40:18 ON 17 MAY 2007
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: May 11, 2007 (20070511/UP).

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.12	6.53

FILE 'HCAPLUS' ENTERED AT 13:41:23 ON 17 MAY 2007
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FILE COVERS 1907 - 17 May 2007 VOL 146 ISS 21
FILE LAST UPDATED: 15 May 2007 (20070515/ED)

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This file contains CAS Registry Numbers for easy and accurate

=> s (py<2003 or AY<2003 or PRY<2003)

22885315 PY<2003
4446381 AY<2003
3919309 PRY<2003

SYSTEM LIMITS EXCEEDED - SEARCH ENDED

The search profile you entered was too complex or gave too many answers. Simplify or subdivide the query and try again. If you have exceeded the answer limit, enter DELETE HISTORY at an arrow prompt (=>) to remove all previous answers sets and begin at L1. Use the SAVE command to store any important profiles or answer sets before using DELETE HISTORY.

=> s L8 and L11

L11 NOT FOUND

The L-number entered could not be found. To see the definition of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s L9 and L11

L11 NOT FOUND

The L-number entered could not be found. To see the definition of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s L10 and L11

L11 NOT FOUND

The L-number entered could not be found. To see the definition of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	9.13

FILE 'STNGUIDE' ENTERED AT 13:41:31 ON 17 MAY 2007
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: May 11, 2007 (20070511/UP).

=> file hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	9.19

FILE 'HCAPLUS' ENTERED AT 13:41:55 ON 17 MAY 2007
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FILE COVERS 1907 - 17 May 2007 VOL 146 ISS 21
FILE LAST UPDATED: 15 May 2007 (20070515/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate

=> s (py<2003 or AY<2003 or PRY<2003)

22885315 PY<2003
4446381 AY<2003
3919309 PRY<2003

SYSTEM LIMITS EXCEEDED - SEARCH ENDED

The search profile you entered was too complex or gave too many answers. Simplify or subdivide the query and try again. If you have exceeded the answer limit, enter DELETE HISTORY at an arrow prompt (=>) to remove all previous answers sets and begin at L1. Use the SAVE command to store any important profiles or answer sets before

using DELETE HISTORY.

=> s L8 and (py<2003 or AY<2003 or PRY<2003)

22885315 PY<2003
4446381 AY<2003
3919309 PRY<2003

L11 3895 L8 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> s L9 and (py<2003 or AY<2003 or PRY<2003)

22885315 PY<2003
4446381 AY<2003
3919309 PRY<2003

L12 88 L9 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> s L10 and (py<2003 or AY<2003 or PRY<2003)

22885315 PY<2003
4446381 AY<2003
3919309 PRY<2003

L13 9 L10 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> file stnguide

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.60

11.79

FILE 'STNGUIDE' ENTERED AT 13:42:09 ON 17 MAY 2007

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: May 11, 2007 (20070511/UP).

=> d l13 1-9 ti

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L13 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Highly-branched, low substituted starch products for
use as plasma expanders

L13 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch by polymer
analysis for use as a plasma volume expander

L13 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Comparison of the properties of dextran and hydroxyethyl
starch substituted with benzene tetracarboxylate in terms of their
use in blood transfusion

L13 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Fine structure and hyperfine structure of clinically applied
hydroxyethyl starch

L13 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Hydroxyethyl starch as a plasma
expander: physicochemical properties and enzymic degradation

L13 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Studies on hydroxyethyl starch. Part I: Molecular characterization by size exclusion chromatography coupled with low-angle laser light scattering

L13 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a plasma expander

L13 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a plasma expander

L13 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Hydroxyethyl starch. Fractionation and molecular weight. Distribution by gel chromatography

=> d l13 1-9 ti abs bib

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L13 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Highly-branched, low substituted starch products for use as plasma expanders

AB The invention concerns modified hydroxyethyl and hydroxypropyl starches for clin. use as plasma expanders that have a branching degree of 8-20 mol%, a substitution degree (MS) of 0.05-0.3 and mol. weight of 10,000-450,000. The products are used in peritoneal dialysis. According to expts. with rats, the products deplete faster from liver, spleen, lung and kidney than conventional starch products.

AN 2004:198158 HCAPLUS <<LOGINID::20070517>>

DN 140:223241

TI Highly-branched, low substituted starch products for use as plasma expanders

IN Henning, Klaus

PA Fresenius Kabi Deutschland G.m.b.H., Germany

SO Ger. Offen., 5 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10237442	A1	20040311	DE 2002-10237442	20020816 <--
	DE 10237442	B4	20040819		
	WO 2004022602	A1	20040318	WO 2003-EP8411	20030730 <--
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2003251668	A1	20040329	AU 2003-251668	20030730 <--
	EP 1530593	A1	20050518	EP 2003-793660	20030730 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	CN 1675248	A	20050928	CN 2003-819356	20030730 <--
	JP 2005539107	T	20051222	JP 2004-533291	20030730 <--

US 2006032400 A1 20060216 US 2005-524424 20050722 <--
PRAI DE 2002-10237442 A 20020816 <--
WO 2003-EP8411 W 20030730

L13 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Characterization of hydroxyethyl starch by polymer
analysis for use as a plasma volume expander
AB Hydroxyethyl starch is currently finding increasing
use as a basis material for plasma volume expanders. In
clin. applications it is desirable to have a precise knowledge of the
steric and chemical structure, as these affect the pharmacokinetics and
pharmacol. Characterization involved the determination of the mean molar
masses
and distribution functions of various hydroxyethyl starches,
with molar masses ranging from 40,000 g/mol to 200,000 g/mol and degrees
of substitution from 0.38 to 0.64, by means of size exclusion chromatog.
followed by double detection (MALLS/RI). Hydrodynamic data (Staudinger
indexes, Huggins consts. and equivalent diams.) were determined by viscometric
means. The chemical structure of the hydroxyethyl starches were
clarified by {1H}-13C NMR spectroscopy. Signal assignment for the
{1H}-13C NMR spectra made it possible to carry out an absolute determination
of the

molar, mean and partial degrees of substitution and the degree of
branching. The partial degree of substitution of the carbon atom
C-2 was found to constitute between 60 and 80% of the total degree of
substitution. This value is significantly larger than the partial degrees
of substitution at the atoms C-3 and C-6, which were found to contribute
up to approx. 10% and 20% resp. of the total degree of substitution.
Degrees of branching ranging from 3.1% to 5.5% were detected.

AN 1994:38094 HCAPLUS <<LOGINID::20070517>>
DN 120:38094
TI Characterization of hydroxyethyl starch by polymer
analysis for use as a plasma volume expander
AU Kulicke, Werner Michael; Roessner, Dierk; Kull, Wiebke
CS Hamburg, Germany
SO Starch/Staerke (1993), 45(12), 445-50
CODEN: STARD; ISSN: 0038-9056
DT Journal
LA English

L13 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Comparison of the properties of dextran and hydroxyethyl
starch substituted with benzene tetracarboxylate in terms of their
use in blood transfusion
AB Solns. of dextran and hydroxyethyl starch are used as
plasma substitutes but are not capable of carrying oxygen in vivo. To
transform these solns. into blood substituents, it has been suggested that
the natural oxygen-carrier protein, i.e. human Hb, is bound to these
polymers. However, the polymers have to be modified so that in the
protein conjugate Hb exhibits the appropriate oxygen-binding properties.
Thus, covalent conjugates of oxyHb and of dextran substituted with benzene
tetracarboxylate have been used and appear effective vascular oxygen
carriers. The same procedure was applied to hydroxyethyl
starch but this polysaccharide, because of its
branched nature, could not be substituted with benzene
tetracarboxylate without being highly crosslinked as evidenced by NMR and
low-angle laser light-scattering analyses. In the Hb-hydroxyethyl
starch covalent conjugates, the polymer-linked benzene
tetracarboxylate groups are not easily accessible to the allosteric site
of the protein as in the dextran conjugates, and therefore cannot improve
its oxygen-binding properties.

AN 1993:219728 HCAPLUS <<LOGINID::20070517>>
DN 118:219728
TI Comparison of the properties of dextran and hydroxyethyl

starch substituted with benzene tetracarboxylate in terms of their use in blood transfusion

AU Huguet, Marie Laure; Prouchayret, Florence; Grandgeorge, Michel; Dellacherie, Edith
CS Lab. Chim. Phys. Macromol., ENSIC, Nancy, 54001, Fr.
SO Carbohydrate Polymers (1993), 20(2), 125-30
CODEN: CAPOD8; ISSN: 0144-8617
DT Journal
LA English

L13 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Fine structure and hyperfine structure of clinically applied hydroxyethyl starch

AB The Mark-Houwink-relations for different samples of clin. used hydroxyethyl starches were established by multi-detection HPGPC. In combination with the degree of branching, the degrees of substitution DS and the molar substitution MS for the different mol. regions were measured by gas chromatog. methylation anal. Within the mol. regions of nonreducing anhydroglucose units, branching units and linear units characteristic differences were found.. For hydroxyethyl starches which were prepared from enzymically hydrolyzed waxy corn starch by α -Amylase, a significantly higher degree of branching was found than for samples prepared by acid hydrolysis. The clin. relevance of these results is discussed.

AN 1992:537593 HCAPLUS <<LOGINID::20070517>>

DN 117:137593

TI Fine structure and hyperfine structure of clinically applied hydroxyethyl starch

AU Sommermeyer, Klaus; Hildebrand, Ulrich; Cech, Franz; Pfitzer, Edith; Henning, Klaus; Weidler, Burghard
CS Fresenius AG, Oberursel, 6370, Germany
SO Starch/Staerke (1992), 44(5), 173-9
CODEN: STARDD; ISSN: 0038-9056
DT Journal
LA German

L13 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation

AB Hydroxyethyl starch (HES) as a plasma expander was subjected to measurements of fundamental physicochem. properties as a polymer. In order to investigate the efficacy and security for the clin. use, enzymic degradation of HES was studied in vitro with *Bacillus amyloliquefaciens* α -amylase (BLA) and with human plasma. A fast decrease of the intrinsic viscosity, η , of HES in the initial stage of degradation with BLA was followed by a gradual decrease and approach to limiting values, which depended on the samples. Original and degraded samples of HES were fractionated by gel filtration, and several properties of the fractions were measured. Different relations between η and weight average mol. wts. (M_w) were obtained, and the structure and some properties of the fractions should be different among the original samples; HES is a highly branched polymer. Characteristics of HES were noticeable heterogeneities not only in the mol. weight spread over very wide region but also in the structure and the degree of substitution (D.S.) both inter- and intra-molecularly. Two samples of HES, 6-HES and Hessol, having high values of M_w and d.s., contained fractions of very high mol. weight and were degraded insufficiently with enzyme. Remaining fragments of high-mol. weight could not permeate the kidney membrane, suggesting the possibilities of remaining and/or accumulation of them in human bodies. On the other hand, Hespander, having small a M_w and d.s. was degraded as fast as amylopectin. In this HES the substitution of hydroxyethyl groups into amylopectin do not affect the validity to prolong the persistence time of the plasma expander. Considerable amount of small mols. in

Hesponder, contained originally and produced by degradation, could be excreted rapidly and may impair the kidney function, besides the very small mols. may be released through vascular wall resulting in the reduction of efficacy as the plasma expander and the possibilities of accumulation into organs and tissues in human bodies. Thus, the efficacy and security of the present products of HES are not reliable as plasma expanders, and further investigations and improvements should be required for the clin. use.

AN 1987:502587 HCAPLUS <<LOGINID::20070517>>

DN 107:102587

TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation

AU Ohta, Kazuko; Kawahara, Kazuo

CS Sch. Pharm. Sci., Nagasaki Univ., Nagasaki, Japan

SO Seitai Zairyo (1987), 5(1), 3-13

CODEN: SEZAEH; ISSN: 0910-304X

DT Journal

LA Japanese

L13 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Studies on hydroxyethyl starch. Part I: Molecular characterization by size exclusion chromatography coupled with low-angle laser light scattering

AB Two com. available hydroxyethyl starch (HES) [9005-27-0] preps. (in clin. use as plasma expanders) specified with .hivin.Mw = 450,000/MS = 0.7 and .hivin.Mw = 200,000/MS = 0.5, resp., and 3 exptl. HES-samples (supposedly similar to the com. product with the specification 450,000/0.7, except of one with MS = 0.5) were studied. The latter were prepared via acid or enzymic hydrolysis of waxy-maize starch. Each of the samples was characterized by its intrinsic viscosity and molar substitution, and was studied with low-angle laser light scattering (LALLS) and with size exclusion chromatog. (SEC) coupled with LALLS. The weight-average mol. weight .hivin.Mw of the com. samples

was 60-80% higher than the value given in the product declaration. This discrepancy can be explained by the argument that previous measurements were not carried out at sufficiently small scattering angles to enable reliable extrapolation to zero angle. The calibration functions .hivin.Mw(v) of the individual HES samples measured by SEC/LALLS-coupling are identical over a broad range of the elution volume v. The small, but detectable differences in the .hivin.Mw(v)-functions indicate interesting differences between these HES-preps. with respect to the effective hydrodynamic d. of the branched HES-mols.

AN 1985:225972 HCAPLUS <<LOGINID::20070517>>

DN 102:225972

TI Studies on hydroxyethyl starch. Part I: Molecular characterization by size exclusion chromatography coupled with low-angle laser light scattering

AU Lederer, K.; Huber, C.; Dunky, M.; Fink, J. K.; Ferber, H. P.; Nitsch, E.

CS Inst. Chem. Phys. Technol. Kunststoffe, Montanuniv. Leoben, Austria

SO Arzneimittel-Forschung (1985), 35(3), 610-14

CODEN: ARZNAD; ISSN: 0004-4172

DT Journal

LA English

L13 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a plasma expander

AB Intrinsic viscosities, and number and weight average mol. wts. were determined for a com.

sample of hydroxyethyl starch (I) [9005-27-0] and its fractions. The exponent a of the Mark-Houwink equation was 0.27 for 0.1 M-NaCl aqueous solution and 0.24 for DMF solution, showing that I has many branches.

Compared with the mol. weight, $M_w = 18.45 \times 10^4$, the viscosity was very low, 0.165 dL/g in H₂O, possibly because of such a highly branched mol. configuration.

AN 1979:478833 HCAPLUS <<LOGINID::20070517>>

DN 91:78833

TI Characterization of hydroxyethyl starch used as a plasma expander

AU Sakamoto, Ryuichi; Kojima, Tokuhisa; Yamaguchi, Shizuo

CS Fac. Eng., Univ. Gifu, Gifu, Japan

SO Gifu Daigaku Kogakubu Kenkyu Hokoku (1979), (29), 22-6
CODEN: GDKHAO; ISSN: 0376-0332

DT Journal

LA English

L13 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a plasma expander

AB The plasma expander hydroxyethyl

starch [9005-27-0] was prepared from hydrolyzed corn starch

[9005-25-8] and ethylene oxide [75-21-8], and its viscosity, osmotic pressure, light scattering measurement, and other phys. properties were determined The mol. weight of the preparation ranged from 1.84×10^4

as determined by the osmotic pressure method, and from 4.7×10^4 to 40.08×10^4 by the light scattering method. The exponents of the Mark-Houwink equation indicated that the preparation was a highly branched polymer. The clin. application of the plasma expander is discussed.

AN 1977:444216 HCAPLUS <<LOGINID::20070517>>

DN 87:44216

TI Characterization of hydroxyethyl starch used as a plasma expander

AU Sakamoto, Ryuichi; Kojima, Tokuhisa; Yamaguchi, Shizuo

CS Fac. Technol., Gifu Univ., Kakamigahara, Japan

SO Kobunshi Ronbunshu (1977), 34(4), 275-9

CODEN: KBRBA3; ISSN: 0386-2186

DT Journal

LA Japanese

L13 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Hydroxyethyl starch. Fractionation and molecular weight. Distribution by gel chromatography

AB The mol. weight distribution (.hivin. M_w) of fractions of hydroxyethyl starch (I), obtained by preparative gel chromatog., are determined by light scattering, osmometry, and viscometry. I was prepared by gelatinizing waxy maize starch in boiling H₂O, hydrolyzing partially with dilute HCl, neutralizing the resulting solution, and treating with ethylene oxide. The substitution degree was determined by Morgan's method (1946). I had .hivin. M_w of 77,000, as compared to 55,000 for dextran. In solution the dextran mol. is more extended than the heavily branched I mol. The use of I as plasma volume expander is discussed.

AN 1970:45255 HCAPLUS <<LOGINID::20070517>>

DN 72:45255

TI Hydroxyethyl starch. Fractionation and molecular weight. Distribution by gel chromatography

AU Granath, Kirsti; Stromberg, Ragnar; De Belder, A. N.

CS Res. Div., Pharm. AB, Uppsala, Swed.

SO Staerke (1969), 21(10), 251-6

CODEN: STRKA6; ISSN: 0038-9056

DT Journal

LA English

=> d his

(FILE 'HOME' ENTERED AT 12:23:47 ON 17 MAY 2007)

FILE 'REGISTRY' ENTERED AT 12:24:01 ON 17 MAY 2007

L1 STRUCTURE UPLOADED
L2 0 S L1

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:37:04 ON 17 MAY 2007
SEA (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE) AND (BRANCHED OR

1 FILE ADISCTI
496 FILE AGRICOLA
16 FILE ANABSTR
13 FILE ANTE
3 FILE AQUALINE
109 FILE AQUASCI
190 FILE BIOENG
2082 FILE BIOSIS
883 FILE BIOTECHABS
883 FILE BIOTECHDS
389 FILE BIOTECHNO
977 FILE CABA
4841 FILE CAPLUS
55 FILE CEABA-VTB
17 FILE CIN
18 FILE CONFSCI
1 FILE CROPB
34 FILE CROPU
10 FILE DDFB
86 FILE DDFU
3629 FILE DGENE
146 FILE DISSABS
10 FILE DRUGB
134 FILE DRUGU
6 FILE EMBAL
872 FILE EMBASE
688 FILE ESBIODBASE
375 FILE FROSTI
680 FILE FSTA
1531 FILE GENBANK
2346 FILE IFIPAT
14 FILE KOSMET
475 FILE LIFESCI
1006 FILE MEDLINE
21 FILE NTIS
2 FILE NUTRACEUT
33 FILE OCEAN
981 FILE PASCAL
2 FILE PHAR
9 FILE PHIN
401 FILE PROMT
1 FILE PROUSDDR
27 FILE RDISCLOSURE
1963 FILE SCISEARCH
660 FILE TOXCENTER
80997 FILE USPATFULL
11413 FILE USPAT2
4 FILE VETU
14 FILE WATER
2043 FILE WPIDS
18 FILE WPIFV
2043 FILE WPINDEX

L3 QUE (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE) AND (BRANCHED OR

FILE 'HCAPLUS' ENTERED AT 13:40:09 ON 17 MAY 2007
L4 223076 S (STARCH OR AMYLOPECTIN OR POLYSACCHARIDE)
L5 166171 S BRANCH OR BRANCHED OR BRANCHING
L6 162696 S HYDROXYETHYL OR HYDROXYALKYL OR HYDROXYPROPYL
L7 4095 S (PLASMA OR BLOOD) (2A) EXPAND?
L8 4841 S L4 AND L5
L9 122 S L4 AND L5 AND L6
L10 9 S L4 AND L5 AND L6 AND L7

FILE 'STNGUIDE' ENTERED AT 13:40:18 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:41:23 ON 17 MAY 2007

FILE 'STNGUIDE' ENTERED AT 13:41:31 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:41:55 ON 17 MAY 2007
L11 3895 S L8 AND (PY<2003 OR AY<2003 OR PRY<2003)
L12 88 S L9 AND (PY<2003 OR AY<2003 OR PRY<2003)
L13 9 S L10 AND (PY<2003 OR AY<2003 OR PRY<2003)

FILE 'STNGUIDE' ENTERED AT 13:42:09 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:42:25 ON 17 MAY 2007

FILE 'STNGUIDE' ENTERED AT 13:42:25 ON 17 MAY 2007

FILE 'HCAPLUS' ENTERED AT 13:42:49 ON 17 MAY 2007

FILE 'STNGUIDE' ENTERED AT 13:42:49 ON 17 MAY 2007

=> log hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.06	45.70
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-7.02

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:42:56 ON 17 MAY 2007

Connecting via Winsock to STN

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LOGINID:SSPTAEXO1623

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.06	45.70

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-7.02

=> file hcaplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.12	45.76

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-7.02

FILE 'HCAPLUS' ENTERED AT 14:32:02 ON 17 MAY 2007
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FILE COVERS 1907 - 17 May 2007 VOL 146 ISS 21
FILE LAST UPDATED: 15 May 2007 (20070515/ED)

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This file contains CAS Registry Numbers for easy and accurate

=> s peritoneal(w)dialysis

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          32238 PERITONEAL
          57952 DIALYSIS
L14       3324 PERITONEAL(W)DIALYSIS

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=> s l9 and l14

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L15       1 L9 AND L14

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=> s L15 and (AY<2003 or PY<2003 or PRY<2003)

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          4446381 AY<2003
          22885315 PY<2003
          3919309 PRY<2003
L16       1 L15 AND (AY<2003 OR PY<2003 OR PRY<2003)

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=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	48.36

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-7.02

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FILE CONTAINS CURRENT INFORMATION.
 LAST RELOADED: May 11, 2007 (20070511/UP).

=> d l15 ti abs bib
 YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L15 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Highly-branched, low substituted starch products for
 use as plasma expanders
 AB The invention concerns modified hydroxyethyl and
 hydroxypropyl starches for clin. use as plasma expanders that have
 a branching degree of 8-20 mol%, a substitution degree (MS) of
 0.05-0.3 and mol. weight of 10,000-450,000. The products are used in
 peritoneal dialysis. According to expts. with rats, the
 products deplete faster from liver, spleen, lung and kidney than
 conventional starch products.
 AN 2004:198158 HCAPLUS <<LOGINID::20070517>>
 DN 140:223241
 TI Highly-branched, low substituted starch products for
 use as plasma expanders
 IN Henning, Klaus
 PA Fresenius Kabi Deutschland G.m.b.H., Germany
 SO Ger. Offen., 5 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10237442	A1	20040311	DE 2002-10237442	20020816
	DE 10237442	B4	20040819		
	WO 2004022602	A1	20040318	WO 2003-EP8411	20030730
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				
	PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,				
	TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
	FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003251668	A1	20040329	AU 2003-251668	20030730
	EP 1530593	A1	20050518	EP 2003-793660	20030730
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1675248	A	20050928	CN 2003-819356	20030730
	JP 2005539107	T	20051222	JP 2004-533291	20030730
	US 2006032400	A1	20060216	US 2005-524424	20050722
PRAI	DE 2002-10237442	A	20020816		
	WO 2003-EP8411	W	20030730		

=> file hcaplus
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-7.80

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 FILE LAST UPDATED: 15 May 2007 (20070515/ED)

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=> s L8 and L14

L17 4 L8 AND L14

=> s L16 and (AY<2003 or PY<2003 or PRY<2003)

4446381 AY<2003
 22885315 PY<2003
 3919309 PRY<2003

L18 1 L16 AND (AY<2003 OR PY<2003 OR PRY<2003)

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	2.60	56.57

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-7.80

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FILE CONTAINS CURRENT INFORMATION.
 LAST RELOADED: May 11, 2007 (20070511/UP).

=> d l17 1-4 ti

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L17 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN
 TI Use of limit β -dextrin as osmotic agent for peritoneal

dialysis produced from amylopectin-containing starch fractions

L17 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Soluble polymers of highly branched glucose

L17 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Highly-branched, low substituted starch products for use as plasma expanders

L17 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Soluble highly branched glucose polymers prepared by enzymic modification of starch or starch derivatives

=> d l17 1 2 4 ti abs bib

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L17 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Use of limit β -dextrin as osmotic agent for peritoneal dialysis produced from amylopectin-containing starch fractions

AB The invention concerns the use of limit β -dextrin prepared from amylopectin-containing starch fractions as osmotic agent in peritoneal dialysis; the use of limit β -dextrin reduces the chance for the accumulation of low mol. weight oligomeric glucose. Thus 20% thin boiling wax corn starch solution was hydrolyzed with hydrochloric acid; low mol. weight fractions were removed with a 5 kDa cut-off ultrafilter. The retained fraction was treated with β -amylase to produce limit β -dextrin with average mol. weight of 55 kD and medium branching degree of 12 mol%.

AN 2006:1180602 HCAPLUS <<LOGINID::20070517>>

DN 145:460593

TI Use of limit β -dextrin as osmotic agent for peritoneal dialysis produced from amylopectin-containing starch fractions

IN Sommermeyer, Klaus

PA Supramol Parenteral Colloids G.m.b.H., Germany

SO Ger. Offen., 3pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 102005020932	A1	20061109	DE 2005-102005020932	20050504
PRAI	DE 2005-102005020932		20050504		

L17 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Soluble polymers of highly branched glucose

AB The invention relates to highly branched soluble polymers of glucose having a reducing sugar content lower than 1%, a content of α -1,6-glucosidic bonds 13-17% and mol. weight (0.9-1.5) \times 105, characterized by the fact that the distribution profile of branch chain lengths is 70-85% of d.p. <15, 10-16% of d.p. 15-25 and 8-13% of d.p. >25. These polymers are manufactured by successive treatment of a \geq 30% aqueous starch solution with a branching enzyme and then with β -amylase and fractionation of high-mol.-weight material.

AN 2005:549741 HCAPLUS <<LOGINID::20070517>>

DN 143:61671

TI Soluble polymers of highly branched glucose

IN Fuertes, Patrick; Roturier, Jean Michel; Petitjean Reiland, Carole

PA Roquette Freres, Fr.
SO Fr. Demande, 38 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2864088	A1	20050624	FR 2003-15085	20031219
	FR 2864088	B1	20060428		
	CA 2491278	A1	20050619	CA 2004-2491278	20041217
	NO 2004005555	A	20050620	NO 2004-5555	20041220
	KR 2005062462	A	20050623	KR 2004-108970	20041220
	EP 1548033	A2	20050629	EP 2004-293056	20041220
	EP 1548033	A3	20051026		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
	AU 2004240206	A1	20050707	AU 2004-240206	20041220
	US 2005159329	A1	20050721	US 2004-15640	20041220
	JP 2005213496	A	20050811	JP 2004-367217	20041220
	CN 1654480	A	20050817	CN 2004-10103262	20041220
PRAI	FR 2003-15085	A	20031219		

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Soluble highly branched glucose polymers prepared by enzymic
modification of starch or starch derivatives

AB Soluble highly branched glucose polymers with a reducing-sugar
content of $\leq 1\%$ are characterized by $>10\%$ (preferably 12-30%)
 α -1,6 glucosidic linkages, a mol. weight of 0.35×10^5 to 2×10^5
daltons, and an osmolality of 1-15 mOsm/kg. The glucose
polymers are obtained by incubating starch or a starch
derivative with a branching enzyme (e.g., Bacillus
stearothermophilus glycogen-branching enzyme) and by subsequent
treatment with a hydrolytic enzyme (e.g., amylase or amyloglucosidase) or
 α -transglucosidase. Membrane or chromatog. techniques are used to
recover the high-mol.-weight fractions. The glucose polymers have particular
application in enteral and parenteral nutrition, in peritoneal
dialysis, as inhibitors and(or) regulators in glycemia, as an
energy source for phys. activity, and a regulator of digestion. The
polymers may also have application in the paper and paperboard industry,
in textiles, and cosmetics.

AN 2003:969394 HCAPLUS <<LOGINID::20070517>>

DN 140:19856

TI Soluble highly branched glucose polymers prepared by enzymic
modification of starch or starch derivatives

IN Backer, Daniel; Saniez, Marie-Helene

PA Roquette Freres, Fr.

SO Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1369432	A2	20031210	EP 2003-291325	20030603
	EP 1369432	A3	20040211		
	EP 1369432	B1	20060809		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	FR 2840612	A1	20031212	FR 2002-6952	20020606
	FR 2840612	B1	20050506		

AT 335767	T	20060915	AT 2003-291325	20030603
US 2004014961	A1	20040122	US 2003-454225	20030604
US 6861519	B2	20050301		
CA 2430557	A1	20031206	CA 2003-2430557	20030605
JP 2004161998	A	20040610	JP 2003-161125	20030605
CN 1468867	A	20040121	CN 2003-142428	20030606
US 2005142167	A1	20050630	US 2005-66423	20050228
US 7211662	B2	20070501		
PRAI FR 2002-6952	A	20020606		
US 2003-454225	A3	20030604		